IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of

Applicants	: Walter Keith Jones
Serial No.	: 10/596,513
Filed	: December 16, 2008
Title	: **OLIGONUCLEOTIDE DECOYS AND METHODS OF USE**
Docket	: 10738-103
Examiner	: Wu Cheng Winston Shen
Art Unit	: 1632
Confirmation No.	: 7508

DECLARATION UNDER 37 CFR §1.131

Sir:

I, Walter Keith Jones, declare and state:

1. I am the inventor of the above-identified patent application.

2. I am familiar with the Office Action mailed July 7, 2011, including the rejections made by the Examiner therein. I am also familiar with Dzau et al., United States Patent Application Publication US 2003/0186922 (hereafter, "Dzau"), which was cited by the Examiner against the above-identified patent application. Dzau first published October 2, 2003.

3. On a date prior to October 2, 2003, I conceived of the subject matter of claims 1-17 and 19-33 of this patent application. All of the acts reported below were carried out in the United States.

4. On December 19, 2003, I constructively reduced this invention to practice by filing a provisional patent application with the United States Patent & Trademark Office (USPTO). That application was given serial number 60/531,399 by the USPTO. At least from a time prior to October 2, 2003, the publication date of Dzau, until December 19, 2003, the U.S. filing date of the instant application, I was diligent in my efforts to pursue patent protection. Due diligence in reduction to practice is evidenced by the following acts carried out by myself or by others working under my direction and control:

5. On May 5, 2003, I discussed construction of the oligonucleotide decoy concatemers with my lab group, as evidenced by notes made in a lab notebook recording a summary of our meeting (Exhibit A).

6. On June 13, 2003, Dr. Suiwen He, working under my direction, placed orders for the first oligonucleotide starting materials to begin construction of the decoys, as evidenced by the order forms dated June 13, 2003 (Exhibit B).

7. From the time the oligonucleotide starting materials were received, until the date of our constructive reduction to practice by virtue of the filing of U.S. Provisional Application 60/531,399 on December 19, 2003, Dr. Suiwen He continued to work, under my direction and control, on constructing the oligonucleotide decoys of the instant claims, as evidenced by an email sent to me by Dr. He on November 5, 2003, providing a status update (Exhibit C).

8. Further, I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application and any patent issued thereon.

W. Keith Jones

Walter Keith Jones

2002579v1

EXHIBIT A

cell transfection

0.01 mg/ml : smallest partical made.

We need 30 μg/~~ml~~ dose { 1 μg/ml }
(30 mg/ml)

3000{nm} large size DNA 5,900{plasmid

↳ a Rhodamine → Great. plasmid DNA

Polymer sitting in the cell.
Labeling Polymer / DNA

{PCR}{the concatemer} v

I'll do :{ Engineering concatemer. }

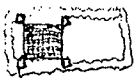
light scattering

1) Toxicology
2) concatemer wrapped by Polymer
3) Cell Culture.. HCIC cardiac cell.
4)

5-5-03 : Lab Meeting:

TNF-α → JNK.

{ p38 antibody.
{ erK



Western: { ① 2M. PC. mRNA again small infarct region
② Protein made or not.

Cal.

{ iNOS Western: Bolli R.. Guo: K/O { paper } }

Mouse iNOS ↑ 3 fold in WT/PC after 24 hr.

{ make PCR on groups have too much variation (2 groups)

{ A.G. }

{ Western } { iNO }

Finish Western.

Antibody { ① Original Transduction
② Santa Cruz. Cruz. Santa Cruz Transduction laboratory.

iNOS antibody.

5-12-03: Lab Meeting: Theresa M. Reineke
Department of Chemistry.

Nonviral Vectors:

no limit to gene size

Polyplexes (poly + DNA)
Lipoplexes (lipid + DNA)

20 ~ <300 nm

endosome DNA through nucleus membrane.

{ chitosan } / PEI mixture.

PEI: toxic
Chitosan: non-toxic

EXHIBIT B

University of Cincinnati DNA Core

2302 Medical Sciences Building
Mail Location: 0524
Cincinnati, Oh 45267-0524

WWW.MOLGEN.UC.EDU/DNACORE/INDEX.HTM
Phone: 513-558-5520
Fax: 513-558-8474

User Name: **SUIWEN HE/W. KEITH JONES** Phone: 558-2356

Department: PHARMACOLOGY Synthesis Date: 6/13/2003

Email address: HESN@EMAIL.UC.EDU Lab Location: CVC 5940

Fund/PO #: PHARMACOLOGY

Options Selected

Selected Scale:
- ○ 10 nmol DNA
- ○ 40 nmol DNA
- ◉ 0.2 umol DNA
- ○ 1.0 umol DNA
- ○ repurify
- ○ 0.2 umol RNA
- ○ 1.0 umol RNA

Purification:
- ◉ none
- ○ 10 nmol desalt
- ○ desalting
- ○ gel purify

Oligo Id #: **77969** : **TANDEM-NFS** Length 38nt

Sequence:
5'> CCGGAATTCCCTTGAAGGGATTTCCCTCCGGATCCGCG

-20°C
in this pad
6/16/03
MB

Molec. Weight : 12391.6 g/mol Tm 122°C Previous ID # Previous weight

********** *Analysis Results* **********

Stepwise Yield :	98.7	%
Overall Yield:	61.1	%
Amount of DNA: (in eppendorf tube)	**954.03**	**ug**
Ratio A260/A280:	1.316	
Column Lot #:	G-MEM	

***Cost Summary**

Cost of Oligonucleotide:	$45.60
Cost of Purification:	$0.00
Specialty fee:	
Shipping	
Total Charge:	$45.60

University of Cincinnati DNA Core

2302 Medical Sciences Building
Mail Location: 0524
Cincinnati, Oh 45267-0524

WWW.MOLGEN.UC.EDU/DNACORE/INDEX.HTM
Phone: 513-558-5520
Fax: 513-558-8474

User Name: **SUIWEN HE/W. KEITH JONES** Phone: 558-2356

Department: PHARMACOLOGY Synthesis Date: 6/13/2003

Email address: HESN@EMAIL.UC.EDU Lab Location: CVC 5940

Fund/PO #: PHARMACOLOGY

Options Selected

Selected Scale:
- ○ 10 nmol DNA
- ○ 40 nmol DNA
- ◉ 0.2 umol DNA
- ○ 1.0 umol DNA
- ○ repurify
- ○ 0.2 umol RNA
- ○ 1.0 umol RNA

Purification:
- ◉ none
- ○ 10 nmol desalt
- ○ desalting
- ○ gel purify

Oligo Id #: **77970** : **TANDEM-NFA** Length 38nt

Sequence:
5'> CGCGGATCCGGAGGGAAATCCCTTCAAGGGAATTCCGG

Molec. Weight : 12586.6 g/mol Tm 122 °C Previous ID # Previous weight

********** *Analysis Results* **********

Stepwise Yield :	99.6	%
Overall Yield:	87.7	%
Amount of DNA: (in eppendorf tube)	**1115.07**	**ug**
Ratio A260/A280:	1.544	
Column Lot #:	G-MEM	

******Cost Summary*****

Cost of Oligonucleotide:	$45.60
Cost of Purification:	$0.00
Specialty fee:	
Shipping	
Total Charge:	$45.60

EXHIBIT C

Date: Wed, 5 Nov 2003 21:35:55 -0800 (PST)
From: Suiwen He <suiwenhe@yahoo.com>
Subject: Re: Thurs
To: Keith Jones <joneswk@uc.edu>
MIME-Version: 1.0

Boss,

I am leaving on Thursday and back to lab on Nov. 18 as I will go to Washington DC and Baltimore for several days after the meeting.

I did the acrylamide gel to purify the annealed decoy after RI/BamHI digetstion and it looked good. I also showed Maria about the gel. I gel purified it and also the vector part. They are both ready to go after I come back for ligation.

My cell phone is 513-237-9801. There seem to be a lot of interesting topics in the meeting as I wnet over the infor.

Please call me if you have any quesionts aobut the lab. I will bring back the 12 copies of CT journal.

S. He

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